

REMARKS

Applicants thank the Examiner for granting an Interview on July 12, 2007 with Applicants' representatives to discuss the pending rejections. The amendments presented in this Reply address the pending rejections. Claims 1, 12, 21, 22, 23, and 24 have been amended. New claims 32 and 33 have been added. Support for the amendments and new claim can be found throughout the specification. No new matter has been introduced with this amendment. Claims 1-8, 12, 14-19, 21-26 and 28-33 are pending.

Independent claims 1, 12, 21, 22, 23, and 24 generally relate to methods, keyboards, and terminals in which at least two variables are associated with each individual key, in which the combination of variables assigned to each key and/or key positions can change after a predetermined period of time or different attempts to input a secure access code, which can be used with any number of different user interfaces. The features of applicants' discovery are designed to thwart fraud by preventing: (i) eavesdroppers from identifying the digits of the user's access code when watching the keyboard sufficiently closely as to view the displayed characters; (ii) eavesdroppers from repeating the sequence of keys inputted by the user when watching the keyboard sufficiently closely as to view such displayed sequence; (iii) other methods of fraudulent detection described in the application. See, e.g, page 3, line 8 through page 5, line 27.

Claims 1-8, 10-12, 14-19, 22-24, and 28-31 were rejected under 35 U.S.C. § 103(a) over Maddalozzo, Jr. et al. U.S. Patent 6,434,702 and Morgan et al. U.S. Patent 5,274,370. Maddalozzo discloses a virtual keypad with only one character associated to each individual key, wherein characters (and not the individual keys) are scrambled after each use. Maddalozzo does not disclose a method including associating at least two variables with each individual key for different attempts to input the secure access code such that each variable associated with a

respective key as well as each individual key are different from the previous attempt, as recited in applicant's claim 1.

Maddalozzo also does not disclose a virtual keyboard in which different combinations of variables are associated with different virtual keys for different attempts to input an access code such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 12. Nor does Maddalozzo disclose a virtual keyboard including a graphical user interface for displaying the plurality of virtual keys in different arrangements and different positions for different attempts at inputting information by a user such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 21. Maddalozzo also does not disclose a method including associating two or more variables with each of the plurality of virtual keys, different combinations of variables are associated with different virtual keys for different attempts to input the secure code such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 22, or a secure access terminal including a plurality of virtual keys in which different combinations of variables are associated with different virtual keys for different attempts to access secured electronic information such that each variable is associated with a key different from the previous attempt, as recited in applicants' claim 23. Maddalozzo also does not disclose a method including creating a virtual keyboard in which the combination of variables comprising at least two variables, and different combinations of variables are assigned to different virtual keys after a predetermined time has elapsed, or after a predetermined number of attempts to access a secured terminal such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 24.

Morgan does not disclose what Maddalozzo lacks. Morgan discloses a keypad with two variables associated to each individual key wherein the order of the keys is shuffled after each utilization, but not the pair of values associated to it. For example, at col. 8, lines 43-45, Morgan specified that the order of the keys is shuffled, but not a pair of values associated to it. Morgan does not disclose a method including associating at least two variables with each individual key for different attempts to input the secure access code such that all the variables associated with a respective key as well as each individual key are different from the previous attempt, as recited in applicant's claim 1.

Morgan also does not disclose a virtual keyboard in which different combinations of variables are associated with different virtual keys for different attempts to input an access code such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 12. Nor does Morgan disclose a virtual keyboard including a graphical user interface for displaying the plurality of virtual keys in different arrangements and different positions for different attempts at inputting information by a user such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 21.

Morgan also does not disclose a method including associating two or more variables with each of the plurality of virtual keys, different combinations of variables are associated with different virtual keys for different attempts to input the secure code such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 22, or a secure access terminal including a plurality of virtual keys in which different combinations of variables are associated with different virtual keys for different attempts to access secured electronic information such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 23. Morgan also does not disclose a method including creating a

virtual keyboard in which the combination of variables comprising at least two variables, and different combinations of variables are assigned to different virtual keys after a predetermined time has elapsed, or after a predetermined number of attempts to access a secured terminal such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 24. Indeed, nothing in Morgan teaches or suggests these features of the independent claims recited above.

Thus, neither Maddalozzo nor Morgan teaches or suggests every element of applicant's claimed invention. Nor do Maddalozzo or Morgan contain any motivation for one of ordinary skill in the art to combine Maddalozzo and Morgan to render applicant's claims 1, 12, 22-24, or their dependent claims obvious. For these reasons, applicant respectfully requests reconsideration and withdrawal of this rejection.

Claim 21 was rejected under 35 U.S.C. § 103(a) over Jalili U.S. Patent 6,209,104 and Morgan. Jalili discloses a data entry method in which icons are displayed in various positions on a screen, and the icons are associated with data. A user selects an icon, and the system determines the data selected based on the position of the icon on the screen. Jalili does not disclose a virtual keyboard including a graphical user interface for displaying the plurality of virtual keys in different arrangements and different positions for different attempts at inputting information by a user such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 21. As described above, Morgan does not disclose what Jalili lacks. Thus, Jalili and Morgan combined do not teach or suggest every element of applicant's claim 21; nor do Jalili or Morgan contain any motivation to one of ordinary skill in the art to combine Jalili and Morgan to render applicant's claim 21 obvious. Applicant respectfully requests reconsideration and withdrawal of this rejection.

Claims 25 and 26 were rejected under 35 U.S.C. § 103(a) over Maddalozzo, Morgan, and Chasko et al. U.S. Patent 6,715,078. For the reasons stated above, Maddalozzo and Morgan do not recite every element of applicant's claim 24, from which claims 25 and 26 depend. Chasko does not disclose what Maddalozzo and Morgan lack. Chasko discloses a system for securely encrypting data, such as PIN information. Chasko does not disclose a method including creating a virtual keyboard in which the combination of variables comprising at least two variables, and different combinations of variables are assigned to different virtual keys after a predetermined time has elapsed, or after a predetermined number of attempts to access a secured terminal such that each variable is associated with a key different from the previous attempt, as recited in applicant's claim 24. Thus, Maddalozzo, Morgan and Chasko combined do not disclosed every element of applicant's claim 24. Nor is there any teaching in Maddalozzo, Morgan, or Chasko that would motivate one of ordinary skill in the art to combine the references to render applicant's claim 24 obvious. For these reasons, applicant respectfully requests reconsideration and withdrawal of this rejection.

New claims 32 and 33 are patentable over the references of record. Specifically, the references of record do not describe or suggest a method in which each individual key, which is associated to the combination of variables, is generated by a predetermined sequence, the predetermined sequence optionally changing after a predetermined period of time or a predetermined number of access attempts or a method including changing a pattern of individual keys from user to user or after a predetermined period of time.

For the foregoing reasons, all claims 1-8, 12, 14-19, 21-26 and 28-33 are now in condition for allowance, which is respectfully requested.

The PTO is hereby authorized to charge/credit any fee deficiencies or overpayments to Deposit Account No. 19-4293. If further amendments would place this application in even better condition for issue, the Examiner is invited to call applicant's undersigned attorney at the number listed below.

Respectfully submitted,

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Date


Timothy C. Bickham, Reg. No. 41,618

STEPTOE & JOHNSON LLP
1330 Connecticut Ave., N.W.
Washington, D.C. 20036
Telephone: (202) 429-3000
Facsimile: (202) 429-3902